

SUPPORT FOR THE AMENDMENTS

Claim 53 is amended to incorporate the limitation of Claim 61 and to particularly point out an embodiment of the invention wherein "a metal" is used, as distinguished from a "combination of metals". This language (and the distinction between "a metal" and a "combination of metals") is set forth in the specification *inter alia* in paragraph [050], second sentence. Accordingly, Claim 61 is cancelled.

Claim 63 is amended to remove "such as" language.

The amendments to Claims 66-68, 70-72, and 79-83 are believed to be strictly editorial in nature, e.g., as necessitated by the changes noted above.

Claim 69 is cancelled as being no longer within the scope of Claim 53.

Claims 103-106, drawn to products, are cancelled in order to facilitate allowance, without prejudice to filing a continuation concerning the subject matter therein.

Thus it is believed that there is no possibility of new matter and entry and consideration is respectfully requested.

REMARKS

Claims 54-60, 62-68, and 70-102 are in the case. Claims 53, 63, 66-68, 70-72, and 79-83 are amended. All other claims have been cancelled.

Applicant's would first like to thank Examiner Puttlitz for the very helpful and courteous discussion of 25 February 2008 with Applicant's representative. During the discussion, the experimental results set forth in the specification were discussed with respect to the teachings set forth in the prior art as represented by the Raja et al. (*Angew. Chem. Int. Ed.* **2001**, *40*, No. 24, 4638-4642), and Brunner et al. (U.S. 6,284,917) references, hereinafter Raja and Brunner, respectively.

While no agreement was reached during the discussion, Applicant's have subsequently reconsidered what they consider to be their invention.

Accordingly, the present invention is directed to hydrogenating one or more benzenepolycarboxylic acids (or derivatives thereof) by contact a catalyst comprising a metal active for hydrogenation-dehydrogenation, said metal applied to a catalyst support comprising one or more ordered mesoporous materials, wherein said ordered mesoporous silica is a metallosilicate.

It is important to note that Applicant's intend that the phrase "a metal" is to be interpreted as being distinguished from a "combination of metals", as made clear in paragraph [050] of the present specification.

Raja, in contrast, teaches bimetallic catalyst on mesoporous silica - clearly a combination of metals on mesoporous silica. The present claim language using "a metal", as discussed above, is believed to exclude the catalysts set forth in the reference. Thus, this reference does not anticipate the present claims.

Brunner, which incidentally is cited in the present specification (with reference to its foreign counterpart) at paragraph [011], is believed to be closer to the present claims than Raja. Brunner discusses, among other catalysts, ruthenium (Ru) on a support which may comprise up to 95% mesoporous material. Curiously, the Brunner reference appears almost silent on types of mesoporous material that can be used, with the exception that "mesoporous/macroporous aluminum oxide" is used as an example (see column 12 of the reference). Accordingly, Brunner does not identically disclose the present invention.

For these reasons, it is believe neither Raja nor Brunner anticipates the present claims and it is respectfully requested that the rejection under §102 be withdrawn.

With regard to obviousness under §103, Applicant's urge that with respect to this specific field of the catalyst art - that is, the art of selectively hydrogenating the benzene ring to make cyclohexane carboxylates - it is clear from the art of record that there is no predictability whatsoever. It would just be a guess if a combination of one part of the catalyst of Raja and one part of the catalyst of Brunner were to be combined to make a catalyst for selective hydrogenation as called for by the present invention.

Moreover, it is believed that Table 1 on page 30 of the present application provides the best comparison of the present invention with what is suggested by the prior art. That is, in Table 1, reproduced below for the convenience of the Examiner, hydrogenation using ruthenium on MCM-41 (Examples 8c and 8e) are compared with hydrogenation using ruthenium on alumina (Example 8a), as suggested by Brunner. Clearly, in direct comparison, catalysts according to the present claims are superior with respect to conversion and wt % lights produced. Such results are not fairly suggested by any reference of record, alone or in combination.

Table 1									
Example	Catalyst	Weight DNP (g)	Weight Catalyst (g)	Temp (°C)	Pressure (psig)	Time (h)	Conversion mole %	Lights (wt %)	Hydrogenation Method
8a 1 Run	Ru on Al ₂ O ₃ (Ex 6)	193.6	10.0	120 °	840	7.5	97.1	0.90	Example 7b
8b 3 Runs	Ru on MCM-41/Al ₂ O ₃ (Ex 4)	192.1	10.01	120°C	840	7.5	97	0.74	Example 7b
8c 2 Runs	Ru on MCM-41 crystal (Ex 3)	194.5	10.0	120°C	840	7.5	99+	0.44	Example 7b
8d 2 Runs	Ru on Al ₂ O ₃ (Ex 5)	154.8	8.1	120°C	3000	3	96.0	0.64	Example 7a
8e 1 Run	Ru on MCM-41 Crystal (Ex 3)	137.4	6.07	120°C	3000	3	99.9+	0.35	Example 7a

For these reasons, it is respectfully requested that the rejection under §103 be withdrawn.

Finally, Claims 63-65 are rejected under §112, second paragraph, because the "designations" are considered to be inappropriate, e.g., possible improper use of trademarks.

Applicant's note that the designations SBA, SFM, MCM-41, etc. as now set forth in these claims are not believed to be trademarks but rather are "designations" of particular known types of mesoporous material structures. These designations have become widely accepted by the scientific community, to the point that these terms are used in numerous publications and patents; see, for

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instance, U.S. 6284917 and WO2004045767. Many if not all of these are even included in encyclopedias such as Wikipedia on-line.

Accordingly, it is respectfully requested that the rejection under §112 be withdrawn.

There being no further issues, Applicants respectfully urge that the present application is in condition for allowance and early indication of such is earnestly solicited.

Respectfully submitted,

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Date

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